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GROUP 3710/3720 FACSIMILE TRANSMITTAL

DATE: 28 JAN 2004

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SERIAL NO: 10/065712 ATTY. DK.#: PU2101

FROM: PASSANITI VOICE: 703-308-1006 AU: 3711

FAX NUMBERS:

(PLEASE FAX PAPERS TO THE NUMBER INDICATED BELOW)

FORMAL PAPERS ~~703-305-3579/3580~~ 703-872-9306

~~DRAFT PAPERS 703-308-7769 703-308-7768 703-305-9035~~

NOTES: **Please indicate whether reply is a FORMAL or Draft amendment.**

___ **Please notify examiner that reply has been faxed.**

COMMENTS:

COURTESY COPY OF OFFICE ACTION, MAILED 01/14/04.

OF PAGES: 6
(INCLUDING COVER SHEET)

DETAILED ACTION

This Office action is responsive to communication received 07/02/2003 – IDS.

Claims 1-9 are pending.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long in view of applicant's admission of Prior Art (specification pages 1, 2 and page 5), Kodama, Saito, Parente, Chou and Zebelean. As to claim 1, the patent to Long differs from the claimed invention in that Long does not disclose the specific titanium alloy, the mass and volume of the head and the thickness of the various elements of the head. Note, Long does recognize that titanium or its alloys may be used to fabricate the head. Saito shows it to be old in the art of titanium alloy production to manufacture a titanium alloy comprising aluminum, tin, chromium, molybdenum and zirconium. Saito acknowledges that excellent strength, rigidity and wear resistance may be achieved with reduced cost over conventional titanium alloys when alpha phase titanium is employed and specifically notes that the material is useful for the fabrication of club heads (col. 9, lines 30-65). While the material exemplified by Saito lacks the silicon required by the claims, it is clear other titanium alloys exist that indeed comprise the required elements. Saito is merely presented to teach that the use of alpha-phase titanium is well known in

the golf club art. As for the specific claimed titanium alloy, the applicant has disclosed on page 5 of the specification that the material is commonly available. Clearly, the applicant has not invented the claimed material. As for the required mass and volume requirements of claim 1 and the required volume constraint of claim 8, Kodama shows it to be old in the art to provide a hollow club head with a maximum weight of 200 grams and a volume of between 300 and 900 cubic centimeters. These parameters are optimized to control the moment of inertia of the club head so as to control flight distance and limit the amount of directional veering of a struck ball from a designated path (col. 1, lines 1-66). In view of the patent to Kodama, it would have been obvious to modify the device in the cited art reference to Long by adjusting the mass and volume of the head to include limitations consistent with those that are recited in claim 1, the motivation being to desirably enhance the moment of inertia of the club head. As for the claimed coefficient of restitution (COR), the claimed figure falls within the guidelines set forth by the USGA. Note the patent to Chou indicating that a COR outside (greater than) 0.83 walls falls outside of acceptable USGA parameters (col. 1, lines 24-33). Thus, the skilled artisan would have found it obvious to modify the Long device to include a COR of between 0.80 and 0.83, the motivation being to ensure that the club head complies with USGA regulations. Concerning the claimed thickness values of the crown, sole and face made part of claim 1 and the striking plate thickness noted by claim 2, observe that Zebelean discusses that the various shell pieces may be fabricated with a thickness that optimizes the weight distribution of the head. Specific values for the sole, face and crown are provided by Zebelean in col. 4, lines 25-55.

for the sole and crown thickness disclosed by Zebelean is slightly outside the range claimed by the applicant, the skilled artisan, having gleaned an appreciation for the effect of shell thickness on the overall weight distribution as discussed by Zebelean, would have found it obvious to modify the Long device to include suitable ranges for the crown, sole and face parts, the motivation being to control the driver's weight. This observation regarding the effect on weight distribution by varying the thickness of the shell pieces is further exemplified by the Parente reference (col. 4, line 61 through col. 5, line 40). Moreover, the applicant has not disclosed that the claimed dimensions are critical. With respect to claims 2-7, the applicant has admitted (specification, pages 1,2) that prior art clubs include a club body and striking face normally welded together at a perimeter of the club body, wherein the face element is usually formed or forged and the body element is investment cast. In addition, the base reference to Long already discloses that the body element may be cast from titanium or its alloys while the striking face is either stamped (formed) or cast (col. 3, lines 44-55). While Long does not specifically mention welding, the Prior Art admitted by the applicant obviates the use of a welding operation to join mating pieces of a club head assembly.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long in view of Kodama, Saito, Parente and Zebelean. As a thorough exposition regarding the incorporation of a specific perimeter region thickness, striking face thickness, volume and coefficient of restitution value has been provided in the rejection supra when considering the Kodama, Saito, Parente and Zebelean references, collectively, it is clear that the skilled artisan would have found it obvious to modify the primary device in Long

to include these features for the reasons advanced in the rejection, supra. No further explanation is deemed necessary. Here.

Claims 3 and 4 are objected to because of the following informalities:

As to claim 3, line 2, only one e occurrence of the term "material" is necessary.

As to claim 4, line 2, --the-- should be included after "wherein".

Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

S. Passaniti

Sebastiano Passaniti
Primary Examiner
Art Unit 3711

S.Passaniti/sp
January 12, 2004